RESEARCH HIGHLIGHT

April 2006

Socio-economic Series 06-009

THE ECONOMIC IMPACT OF RESIDENTIAL CONSTRUCTION ON RESERVES

INTRODUCTION

Past studies have shown that the link between residential construction and economic development on reserves[1] is reciprocal. On the one hand, residential construction is not a leading sector, but a sector that responds, a sector whose activity is affected by economic growth, or the lack thereof. On the other hand, the availability of sufficient dwellings of some quality may also help attract people to a location, thus affecting its economic development.

This research report presents estimates of the local economic impact of residential construction on reserves and examines the link between the local economic impact of residential construction and the level of economic development on reserves.

METHODOLOGY

The main challenge of a local impact analysis is obtaining good information about the local content of labour and materials used in residential construction and related infrastructure, and on the local content of purchases made from income generated from this construction. A survey was required because there was a lack of the specific information needed for this type of analysis.

The starting point for the analysis was the Census Subdivisions (CSDs). CSDs are a more data-rich source of information than population data for reserves alone. They contain 1,700 data points drawn from Census questionnaires. There are 581 CSDs that include reserves. The researchers removed 48 of these CSDs from the database because the Aboriginal population was less than 50 per cent, indicating that they probably include non-reserve communities.

From the remaining 533 CSDs, the researchers selected a random sample of 100 for the survey. Special care was taken to make the sample representative of all First Nation reserves, taking into account population size, degree of urban influence, geographic location, level of economic development and CMHC (Canada Mortgage and Housing Corporation) program coverage. Forty-five First Nations, representing 63 CSDs or more than 12 per cent of the 533 CSDs, responded to the survey.

The survey questionnaire collected quantitative information about the number and value of newly built dwellings, renovation projects and infrastructure development projects; financing of these projects; and expenditure on local labour and materials.

To estimate the local economic impact of residential construction on reserves, the survey results were used with Informetrica Limited's "Local Impact Model." The individual estimates for each reserve surveyed were weighted by construction activity in the reserve to derive the aggregate local economic impact of residential construction in the 533 CSDs with an Aboriginal population of more than 50 per cent.

LIMITATIONS

The research report makes the following observations about the quality of the impact estimates:

- Forty-five First Nations responded to the survey providing data on the reserves they oversee. The responses therefore represent 63 CSDs and 12 per cent of the 533 CSDs. The researchers considered the responses as sufficient representation of the original population.
- The response rate was lower than 10 per cent in Quebec and Manitoba. This does not invalidate the results because the researchers found no reason to assume that possible responses in Quebec and Manitoba would vary significantly from what was found elsewhere.
- The aggregate value of construction reflects the number of dwellings built and renovated in 2004–05 as reported to Indian and Northern Affairs Canada (INAC) and value of construction per unit as reported in the survey. The aggregate value of construction of infrastructure is based on the INAC budget for the same year.

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[1] The Indian Act defines "reserve" as a tract of land that has been set apart by the federal government for the use and benefit of an Indian band. The legal title to Indian reserve land is vested in the federal government. There are 1,052 reserves in Canada.

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- The weights used to aggregate results of the survey are based on construction activity for 2003–04, as detailed data was not available for 2004–05.
- Infrastructure construction activity was underreported in the survey. The aggregate obtained using weights based on housing construction activity in 2003–04 was one-quarter of INAC funding for infrastructure for 2004–05. The mix of infrastructure projects found in completed surveys was different from the allocation in the INAC budget.
- Six First Nations reported no construction activity at all and five First Nations did not report any infrastructure activity. This possible response bias has little effect on the results since the impact estimates reflect aggregate construction activity based on INAC data instead of survey responses.
- Although all but one respondent gave the value of renovation projects, several respondents did not give the split between labour and materials or the local content share. In these and other non-responses, values were substituted from other construction activity on the same reserve or from the same activity on other, similar reserves. These imputations account for only a small part of the total.
- Estimates of net impact depend on assumptions about whether funds used in construction would have been available to the First Nation if construction had not taken place and how the funds would have been spent. In making these assumptions, the source of funds was considered but specific information about alternative uses of funds was not gathered.
- This study examines only the current impact of residential construction and not future impacts. The impact of long-term CMHC subsidy assistance for loan repayment is not reflected.

FINDINGS

Impacts on income and employment

The value of residential construction activity was estimated based on reports on housing activity from First Nations to INAC and the value of construction per dwelling reported in the survey. The value of construction of infrastructure related to residential construction (water and sewers, electricity, roads) is based on the INAC budget. Impacts on income and employment reported by First Nations were "scaled up" using an aggregation formula reflecting population size and degree of urban influence to estimate the impact in all 533 CSDs.

The estimate of the aggregate impact of residential construction on income in 2004 was $148 million. The overall value of construction was $436 million. The local economic impact accounted for 34 per cent of the value of construction in these First Nations.

Analysis also found that residential construction generated 4,250 full-time, full-year employment equivalents in 2004. This is equivalent to 1.3 person years of local employment for each newly constructed dwelling unit excluding infrastructure projects, and 2.4 person-years of local employment if related infrastructure projects are included. The local employment impact of renovations is 0.23 person years per unit renovated.

Of the four different types of construction identified in the survey, *CMHC-subsidized housing construction* was the most prevalent and had the greatest impact. The value of *band housing construction* was less than half of the value of CMHC-subsidized housing, but has a greater impact relative to the value of construction. The survey found that bands generally use more local labour and materials when they finance projects with their own funds. The value of *private* and *other types of construction* is insignificant compared to CMHC-subsidized and band housing construction.

A construction project generates income and employment three ways:

1. A *direct impact* in the form of income for contractors and construction workers who live on the reserve and participate in the project;
2. An *indirect impact* in the form of income for suppliers of construction materials and services;
3. An *induced impact* when income earned because of the project (the direct and indirect impacts) keeps circulating in the reserve when local residents buy goods and services at local stores and businesses.

The study found that the direct impact is the greatest of the three, accounting for 67 per cent of the aggregate gross impact. Even so, there is substantial potential for increasing this, as First Nations hire almost half the labour for construction projects from outside their reserves.

The indirect impact, accounting for 13 per cent of the aggregate gross impact, is smallest. In general, reserves obtain only a small share of construction materials and services from within. The size of the reserve population and degree of urban influence would influence this impact.

The induced impact also varies with the size of the reserve and the level of influence of the nearest urban centre. For the most part, the research found that the larger and more remote and isolated the reserve, the larger the induced effects. This can be explained by the fact that larger and more isolated reserves tend to be more self-sufficient.

RESIDENTIAL CONSTRUCTION AND ECONOMIC DEVELOPMENT

The study found the following relationship patterns between local economic impact and level of economic development:

- Overall, the researchers do not observe a positive link between the level of economic development and the local economic impact of residential construction. The greatest gross local economic impact of residential construction (not including related infrastructure) is observed in reserves with an intermediate level of economic development, that is, an employment ratio between 26 per cent and 42 per cent.
- However, the indirect effects are greatest in the most economically developed reserves. The amount of construction-generated income re-spent on reserve depends on the number of general businesses on the reserve. Seven of the First Nations surveyed did not have any general businesses on reserve. On average, in the reserves surveyed, only 11 per cent of income is spent on purchases on reserve.

CONSTRUCTION BUSINESSES AND CONSTRUCTION WORKERS

Of the 45 First Nations surveyed, 17 did not have construction companies or contractors. There were construction workers in 39 First Nations.

Fifteen First Nations had construction businesses on reserve — 11 established in the previous five years. For 38 First Nations, some construction workers were trained in the last five years. For 22 First Nations, some members qualified as tradespeople, heavy equipment operators, business contractors and/or inspectors.

Only 12 First Nations supplied construction goods or services outside their reserves in 2004. Only two said there had been progress selling goods and services in the last five years.

One First Nation increased sales of gasoline outside the reserve in the last five years. Another said there had been a 20 per cent increase in sales of sand and gravel outside the reserve.

Another First Nation noted that the Ontario First Nations Technical Services Corporation recognizes its high quality, innovative house-building process and that other First Nations are now using the technique. The respondent did not say whether this occurred in the last five years or earlier.

Overall, the survey responses contained little account of progress made by First Nation construction companies in moving activity outside their home communities.

CONSTRUCTION MATERIALS SUPPLIERS

Fifteen First Nations have no construction suppliers in their community; 11 identified only one potential construction supplier — most commonly fuel. Thirteen First Nations had two types of suppliers — most commonly fuel and gravel. Only five had more than two businesses supplying different materials for construction projects.

Several respondents said they had some construction supplies, such as gravel, and it is cheaper to bring construction materials in than to develop them.

GENERAL BUSINESS DEVELOPMENT

Seven First Nations said there are no businesses in their reserves. Most of the First Nations completing the survey have a gas station and a convenience store. Day care is another common type of business. Only some First Nations go beyond these types of businesses. The lack of businesses means that induced effects are small. These First Nations have no induced effects from construction activity, i.e., their income from construction is not re-spent on the reserve.

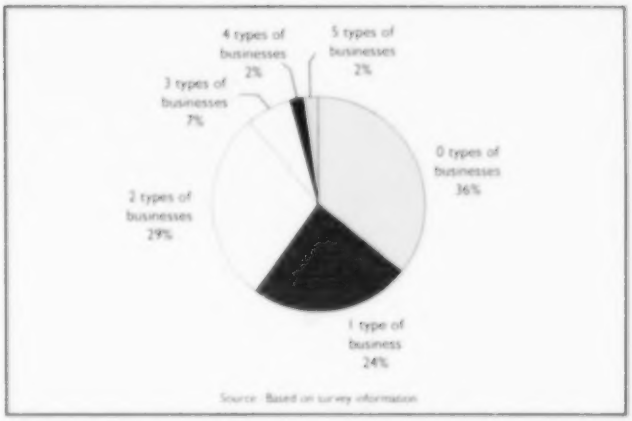
4 types of businesses 2%
5 types of businesses 2%
3 types of businesses 7%
0 types of businesses 36%
2 types of businesses 29%
1 type of business 24%
Source: Based on survey information

Figure 1 — Number of on-reserve businesses

CONCLUSIONS AND NEXT STEPS

Based on the results of this study, the potential for increasing the local economic impact of residential construction on reserves is great.

In concluding the survey, the researchers asked respondents to identify barriers to increasing participation by First Nation members and businesses in residential construction activity. The most common barrier was the lack of funding for construction activity (Table 1). The second, almost as important, was lack of training and education opportunities. Respondents also identified small reserve size and remoteness as two important barriers to increased participation

Lack of funding/funds	14
Lack of training and education	12
Reserve is too small (population)	8
Reserve is isolated and/or remote	7
Lack of adequate or high cost of transportation/freight	6
Unknown/not indicated	5
Little or no construction/renovations in the reserve	4
Social problems (disabilities, lifestyle changes, personal conflicts)	3
Minimal infrastructure/resources	3
Lack of information/no business knowledge	3
Lack of employment opportunities	2
Low economic development	2
Motivation/seeing the bigger picture	2
Land negotiation/lack of lots, sites	2
Reserve not working together	1
INAC decides who runs construction projects	1
No consideration given by INAC, Indian Council founders	1
Lack of willing workers	1
Inadequate child care (for single parents)	1
Communication problems with outside (due to isolation)	1
No barriers	1

Source: Based on survey information

Table 1 — Barriers to increased participation in residential construction and number of respondents identifying them as barriers

Most — 25 — First Nations said they had a strategy for achieving greater economic activity and development from construction of dwellings and related infrastructure. Twenty said either they had no strategy or did not answer. Respondents identified the following strategies:

- Encourage entrepreneurs within the reserve;
- Develop economic partnerships outside the reserve, including cost-sharing partnerships;
- Become more self-sufficient;
- Open new businesses;
- Help own business construction companies save cost;
- Increase use of local labour;
- Encourage more education;
- Provide on-the-job training;
- Lease land to people from outside the reserve and build on it;
- Have bylaws in place to attract developers.

The findings suggest that better financing, new training opportunities and improvement of economic links between reserves and non-reserve communities may help generate more local involvement in residential construction and, as a result, promote greater local economic impacts from residential construction. The development or pursuit of existing economic development strategies could be a key factor in furthering First Nation capacity in residential construction.

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Housing Research at CMHC

Under Part IX of the *National Housing Act*, the Government of Canada provides funds to CMHC to conduct research into the social, economic and technical aspects of housing and related fields, and to undertake the publishing and distribution of the results of this research.

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Printed in Canada
Produced by CMHC 11-05-06

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